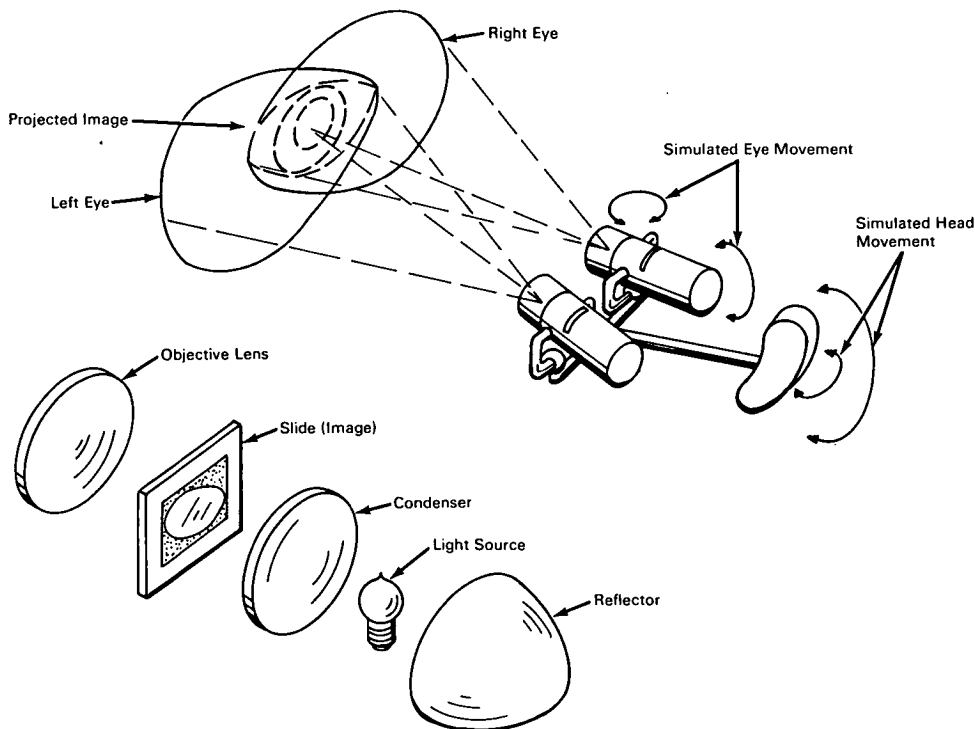


# NASA TECH BRIEF



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## Optical Projectors Simulate Human Eyes to Establish Operator's Field of View



**The problem:** To visualize the limits of an operator's field of view as his eyes are directed at a given point on a control panel. This will assist in the planning and layout of critical instruments and emergency controls according to their functional relationship.

**The solution:** A device that projects visual pattern limits in any direction an operator may be required to look. The device provides instant evaluation of visual ability at any point on a panel.

**How it's done:** The device consists of two projectors that can be pivoted to simulate the range of movement of the human eye and head. Each projector contains a reflector, light source, filter, a slide containing an image, and an objective lens. The light is reflected to the filter where it is diffused to uniformly illuminate the image-containing visual pattern slide and project the image by means of the objective lens. The two images converge at a focal point in a

(continued overleaf)

binocular projection determined by the simulated eye and head movements.

The projected image will show areas on the panel by shadow patterns that are blind to the left, right, or both eyes, due to framework, supports, handles, etc. located between panel and operator position.

**Note:** Inquiries concerning this invention may be directed to:

Technology Utilization Officer  
Western Operations Office  
150 Pico Boulevard  
Santa Monica, California, 90406  
Reference: B66-10010

**Patent status:**

Inquiries about obtaining rights for the commercial use of this invention may be made to NASA, Code AGP, Washington, D.C., 20546.

Source: Robert A. Beam of  
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